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JC20 Rec'd PCT/PTO 12 OCT 2009

NONPROVISIONAL NATIONAL PHASE APPLICATION
FOR LETTERS PATENT
UNITED STATES OF AMERICA

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10 Be it known that we, JONATHAN DAVIS and REBECCA DAVIS,
residing at 5304 Rutland Court, Powder Springs, Georgia
30127, both citizens of the United States, have invented
certain new and useful improvements in an

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APPARATUS AND METHOD FOR PROTECTING A DOOR, DOOR CASING,
DOOR KNOB AND WALL UTILIZING A DOOR BUMP ANGLED BLOCK

20

of which the following is a specification.

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**APPARATUS AND METHOD FOR PROTECTING A DOOR, DOOR CASING,
DOOR KNOB AND WALL UTILIZING A DOOR BUMP ANGLED BLOCK**

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PRIORITY CLAIM

To the full extent permitted by law, the present application claims priority to and the benefit a United States national phase entry to patent cooperation treaty application number PCT/US04/11194, entitled "Apparatus and Method for Protecting a Door, Door Casing, Door Knob and Wall Utilizing a Door Bump Angled Block", filed April 12, 2004, which claims benefit of priority to United States patent application number 10/411,736, entitled "Apparatus and Method for Protecting a Door, Door Casing, Door Knob and Wall Utilizing a Door Bump Angled Block", now abandoned, filed April 12, 2003, which claims benefit of priority to United States patent application number 10/356,007, filed on January 31, 2003.

TECHNICAL FIELD

The present invention relates generally to protection of doors, door casings, door knobs and walls, and more

specifically to an apparatus and method of protecting doors, door casings, door knobs and walls utilizing a door bump angled block to change the position of the door bump in relation to the door and wall.

5

BACKGROUND OF THE INVENTION

Often times, door surfaces, door casings, door knobs
10 and wall surfaces become scratched, dented, and/or suffer from any number of cosmetic damages that unfortunately degrade the external aesthetic appearance of the room or hallway. In order to prevent the door or door knob from engaging an adjacent wall or surface, a door bump is often
15 used. One type of door bump is secured to the wall and positioned in registry with the door such that the door contacts the door bump when the door is opened, thus preventing direct contact between the door or door knob and the wall or door casing. Alternatively, the door bump may
20 be secured to the door, such that when the door is fully opened, the door bump contacts the wall at a generally 90 degree angle.

Typically, such door bumps effectively dissipate the forces generated when the door strikes the door bump. However, such door bumps are not effective at protecting doors, door casings, door knobs and/or wall surfaces unless
5 the door opens such that it approaches the door bump and is perpendicular to the door bump when making contact therewith. In those instances when the opening force of the door is minimal, such prior-art door bumps adequately protect the wall, door and its surrounding members.
10 However, because the door or wall does not contact the door bump squarely, when the opening force of the door is more than minimal, the door or wall will bend and push aside the door bump, causing damage to the door or door knob and/or wall or door casing. Consequently, it is highly desirable
15 to provide an apparatus and method for changing the position of the door bump relative to the door or wall so that the door or wall will contact the door bump squarely.

Doors, door casings, door knobs and walls are also
20 damaged when opening doors swing out too far. For example, when an object or large appliance is positioned behind and adjacent to an opening door, it is located in the path of the swinging door and may be damaged or destroyed.

Doorways with abutting objects are common and often unavoidable in smaller rooms. Previous door bumps, no matter where they are positioned on the door or wall, are often not able to protect or prevent the door from striking
5 the abutting object.

Consequently, various forms of hinge pin mounted door stops have been designed to adjust the extent to which an associated door may be opened. However, these various
10 adjustment structures cause extensive damage to doors, door casings, and walls. After several uses, noticeable wear can be seen on doors, door casings, and walls. Shortly thereafter, dents and holes appear at the points where the hinge pin mounted door stop contacts the door, door casing,
15 and/or wall.

Additionally, many hinge pin mounted door stops crack or split only after moderate use. Many hinge pin mounted door stops are not able to dissipate the forces generated
20 during regular use, putting substantial pressure on the door stop.

Unfortunately, without engaging in unduly expensive and burdensome repair or replacement of such doors, door casings, door knobs and walls to remedy the above-addressed cosmetic concerns, many homeowners are left without any
5 cost-effective or feasible avenue in which to remedy same.

Therefore, it is readily apparent that there is a need for an apparatus and method for changing the position of the door bump relative to the door or wall so that the door
10 or wall will contact the door bump squarely and so that the extent to which a door may be opened may be adjusted.

BRIEF SUMMARY OF THE INVENTION

15 Briefly described, in a preferred embodiment, the present invention overcomes the above-mentioned disadvantages and meets the recognized need for such a device by providing an apparatus and method of protecting doors, door casings, door knobs and walls. This is
20 achieved in the present invention by using a door bump angled block to change the angular position of the door bump relative to the door and wall. Changing the angular position of the door bump to contact the door squarely

allows the door bump to effectively dissipate the forces generated when the door strikes the door bump. Changing the angular position of the door bump can also adjust the extent to which a door may be opened, thereby protecting
5 the door, door casing, door knob, wall and abutting objects.

The door bump angled block has an angled surface relative to the wall mounted surface. Formed within the
10 door bump angled block are preferably two channels, wherein one channel is preferably used to fasten the door bump angled block into the door or wall, and wherein one channel is preferably used to fasten a door bump connector plate to the door bump angled block.

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Accordingly, a feature and advantage of the present invention is its ability to change the position of the door bump to contact the door squarely, thereby allowing the door bump to effectively dissipate the forces generated
20 when the door or wall strikes the door bump.

Another feature and advantage of the present invention is its ability to change the position of the door bump

allowing the user to adjust the extent to which a door may be opened, thereby protecting the door, door casing, door knob, wall and abutting object.

5 Another feature and advantage of the present invention is its ability to adjust the angular position of the door bump relative to the mounting surface, thereby allowing the user to use this device on any door or wall in a building.

10 Another feature and advantage of the present invention is that it can be used with any type of readily available door bump.

15 Another feature and advantage of the present invention is that it is simple to manufacture and use.

20 These and other objects, features and advantages of the present invention will become more apparent to one skilled in the art from the following description and claims when read in light of the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be better understood by reading the Detailed Description of the Preferred and
5 Selected Alternate Embodiments with reference to the accompanying drawing figures, in which like reference numerals denote similar structure and refer to like elements throughout, and in which:

10 **FIG. 1A** is a top view of an apparatus for protecting a door, door casing, door knob and wall according to a preferred embodiment of the present invention, wherein said apparatus is mounted to the wall in such a way that it will contact the door squarely;

15 **FIG. 1B** is a top view of an apparatus for protecting a door, door casing, door knob and wall according to a preferred embodiment of the present invention, wherein said apparatus is mounted to the wall in such a way that the
20 extent to which the door may be opened may be adjusted;

FIG. 1C is a top view of an apparatus for protecting a door, door casing, door knob and wall according to an

alternate embodiment of the present invention, wherein said apparatus is a door bump with a non-perpendicularly angled distal end;

5 **FIG. 2** is a front perspective view of a door bump angled block according to a preferred embodiment of the present invention;

10 **FIG. 3** is a rear perspective view of a door bump angled block according to a preferred embodiment of the present invention;

15 **FIG. 4A** is a cross sectional exploded side view of an apparatus for protecting a door, door casing, door knob and wall according to a preferred embodiment of the present invention, wherein screws are used to attach the door bump angled block to the wall or door, and to attach the connector plate to the door bump angled block;

20 **FIG. 4B** is a top view of a door bump connector plate according to a preferred embodiment of the present invention, wherein preferably disposed on said connector plate are two apertures;

FIG. 5 is a top view of an apparatus for protecting a door, door casing, door knob and wall according to an alternate embodiment of the present invention, wherein the
5 door bump is pivotable along a horizontal axis;

FIG. 6A is a top view of an apparatus for protecting a door, door casing, door knob and wall according to an alternate embodiment of the present invention, wherein the
10 door bump is pivotable along a horizontal axis;

FIG. 6B is a front view of a door bump angled block according to an alternate embodiment of the present invention, wherein a base connector is pivotable along the
15 outer surface of said door bump angled block;

FIG. 7 is a top view of an apparatus for protecting a door, door casing, door knob and wall according to an alternate embodiment of the present invention, wherein the
20 door bump is pivotable along a horizontal axis;

FIG. 8 is a top view of an apparatus for protecting a door, door casing, door knob and wall according to an

alternate embodiment of the present invention, wherein the door bump is pivotable along a horizontal axis;

FIG. 9 is a front view of a door bump angled block according to an alternate embodiment of the present invention, wherein a door bump can be attached to said door bump angled block;

FIG. 10 is a top view of an apparatus for protecting a door, door casing, door knob and wall according to an alternate embodiment of the present invention, wherein the door bump is pivotable along a horizontal axis;

FIG. 11 is a side view of an apparatus for protecting a door, door casing, door knob and wall according to an alternate embodiment of the present invention, wherein the door bump is pivotable along a horizontal axis;

FIG. 12 is a top view of an apparatus for protecting a door, door casing, door knob and wall according to an alternate embodiment of the present invention, wherein said apparatus can be mounted to the wall in such a way that it will contact the door squarely; and

FIG. 13 is a top view of an apparatus for protecting a door, door casing, door knob and wall according to an alternate embodiment of the present invention, wherein said apparatus can be mounted to the wall in such a way that it will contact the door squarely.

**DETAILED DESCRIPTION OF THE PREFERRED
AND SELECTED ALTERNATIVE EMBODIMENTS**

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In describing the preferred and selected alternate embodiments of the present invention, as illustrated in **FIGS. 1-13**, specific terminology is employed for the sake of clarity. The invention, however, is not intended to be limited to the specific terminology so selected, and it is to be understood that each specific element includes all technical equivalents that operate in a similar manner to accomplish similar functions.

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Referring now to **FIGS. 1A-4B**, the present invention in a preferred embodiment is an apparatus **30** for protecting doors, door casings, door knobs and walls generally preferably possessing door bump angled block **50** and door bump **40**. As best illustrated in **FIG. 1A**, door bump angled

block **50** preferably changes the orientation of door bump **40** to protect the door and wall. Although it is preferred that apparatus **30** possess two components, namely door bump angled block **50** and door bump **40**, it is contemplated in
5 alternate embodiments that apparatus **30** comprise a single unit, such as, for exemplary purposes only, a door bump with a non-perpendicularly angled distal end, wherein said distal end mounts the door bump to the surface at a non-perpendicular angle relative to the wall or door. See **FIG.**
10 **1C**.

Furthermore, although it is preferred that apparatus **30** be placed on the lower base of the wall, it is contemplated in alternate embodiments that apparatus **30** be
15 placed in other suitable positions, such as, for exemplary purposes only, towards the bottom of the door, towards the top of the door, on chair railing carried on the wall, or any other location along the wall. In the preferred embodiment, changing the orientation of door bump **40** to
20 contact the door squarely allows door bump **40** to effectively dissipate the forces generated when the door strikes door bump **40**.

Referring now to **FIG. 1B**, apparatus **30** is positioned on the wall, proximal to the door hinge. Changing the position of door bump **40** adjusts the extent to which a door may be opened, thereby protecting the door, door casing, door knob, wall and abutting object.

Referring now to **FIG. 2**, door bump angled block **50** is preferably substantially prism shaped and preferably comprises a top side **52**, a bottom side **54**, sidewalls **56**, **58**, **60**, **62** and **64**, wherein sidewall **56** is adjacent to sidewall **58** disposed at preferably an angle approximately equal to 135 degrees therefrom, sidewall **58** is adjacent to sidewall **60** disposed at preferably an angle approximately equal to 90 degrees therefrom, sidewall **60** is adjacent to sidewall **62** disposed at preferably an angle approximately equal to 90 degrees therefrom, sidewall **62** is adjacent to sidewall **64** disposed at preferably an angle approximately equal to 90 degrees therefrom, and sidewall **64** is adjacent to sidewall **56** disposed preferably at an angle approximately equal to 45 degrees therefrom. Sidewalls **56**, **58**, **60**, **62** and **64**, top side **52** and bottom side **54** together form door bump angled block **50**.

It is recognized that door bump angled block **50**, in alternate embodiments, may have sidewalls of varying lengths disposed at various angles. Door bump angled block **50** may define an alternate, suitable shape such as, for
5 exemplary purposes only, triangle, parallelogram, pentagon, hexagon, or any other shape that has an angled surface relative to the wall mounted surface. Further, although it is preferred that door bump angled block **50** be formed from plastic material, it is contemplated in alternate
10 embodiments that door bump angled block **50** be formed from any suitable material known within the art, such as, for exemplary purposes only, wood, metal or other materials or combinations thereof.

15 Sidewall **56** of door bump angled block **50** has disposed thereon a first end of aperture **70**, wherein aperture **70** is preferably substantially circular shaped. Although it is preferred that aperture **70** is substantially horizontally aligned directly between top side **52** and bottom side **54**,
20 and vertically aligned directly between the right vertical edge of sidewall **64** and the left vertical edge of sidewall **58**, it is contemplated in alternate embodiments that

aperture **70** could be located anywhere on side wall **56** or that there could be more than one aperture **70**.

Referring now to **FIG. 3**, sidewall **62** of door bump
5 angled block **50** has disposed thereon preferably two
apertures **80** and **90**, wherein aperture **80** is preferably
substantially elliptical shaped and aperture **90** is
preferably substantially circular shaped. Although it is
preferred that apertures **80** and **90** are substantially
10 horizontally aligned directly between top side **52** and
bottom side **54** with aperture **80** proximally closer to
vertical edge **66** relative to aperture **90**, it is
contemplated in alternate embodiments that apertures **80** and
90 could be placed anywhere on sidewall **62** and in any
15 proximal relation to each other. It is further
contemplated in alternate embodiments that sidewall **62** can
have more than one aperture **90**.

Referring now to **FIG. 4A**, formed within door bump
20 angled block **50** are preferably two channels **100** and **110**,
wherein channel **100** has an opening at aperture **70** on one
end and an opening at aperture **90** on the other end, and
wherein channel **110** has an opening at aperture **70** on one

end and an opening at aperture **80** on the other end. Although the preferred shapes of channels **100** and **110** are substantially cylindrical, it is contemplated in alternate embodiments that channels **100** and **110** could be any shape or size, so long as channels **100** and **110** are large enough to allow reception of attachment screws **120**, yet narrow enough to allow attachment screws **120** to secure door bump angled block **50** to the wall or door. Additionally, although it is preferred that door bump angled block **50** possess two channels that overlap at aperture **70**, it is contemplated in an alternate embodiment that door bump angled block **50** could contain any number of channels, and that any such channels can be alternately spaced or aligned, wherein at least one channel is used to attach door bump angled block **50** to the wall and wherein at least one channel is used to attach door bump angled block **50** to door bump **40**. It is also contemplated that channel **110** not extend through sidewall **62** such that aperture **80** does not exist.

Preferably, attachment screws **120** have a length sufficiently long enough to extend through door bump angled block **50** to provide an adequate length beyond sidewall **62**, sufficient to allow securing of door bump angled block **50**

to a wall or door, wherein said attachment screws **120** are preferably dimensioned to be received within channel **100** or **110** and are capable of securing door bump angled block **50** to the wall, door or other surface. Although attachment
5 screws **120** are preferably wood screws, it is contemplated in alternate embodiments that alternate means of attachment could be utilized, such as, for exemplary purposes only, machine screws, nails, rivets, glue, magnets, or the like. However, the use of wood screws allows the user to remove
10 door bump angled block **50** from the wall or door, and relocate said door bump angled block **50** to another location on the wall or door.

As shown in **FIG. 4B**, door bump connector plate **130** is
15 preferably a thin connector piece, wherein door bump connector plate **130** has disposed thereon preferably two apertures **140** and **150**. Although it is preferred that door bump connector plate **130** be formed from metal material, it is contemplated in alternate embodiments that door bump
20 connector plate **130** be formed from any suitable material known within the art, such as, for exemplary purposes only, wood, plastic or other synthetic material. Further, although it is preferred that door bump connector plate **130**

be substantially circular, it is contemplated in alternate embodiments that door bump connector plate **130** may define an alternate shape, so long as door bump connector plate **130** has a shape that is suitable to connect door bump **40** to
5 door bump angled block **50**.

Preferably, aperture **140** is located in the center of door bump connector plate **130** and aperture **150** is located towards the periphery of door bump connector plate **130**.
10 Although it is preferred that apertures **140** and **150** be substantially circular, it is contemplated in alternate embodiments that apertures **140** and **150** could be any shape or size, so long as aperture **140** is large enough to allow attachment screw **120** to penetrate it, yet narrow enough to
15 allow attachment screw **120** to secure door bump connector plate **130** to door bump angled block **50**, and so long as aperture **150** has a size and shape that is dimensioned to receive terminal end **160** of tapered coil **170** of door bump
40.

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Although door bump **40** is preferably a rubber cap fixed to the end of a tapered coil, it is contemplated in alternative embodiments that door bump **40** is any device

capable of dissipating the forces generated when the door or door knob strikes the wall or door casing such as, for exemplary purposes only, a spring, air bag or Styrofoam.

5 To secure door bump angled block **50** to the wall or door, attachment screw **120** is inserted into aperture **70** of door bump angled block **50** so that attachment screw **120** passes through channel **100** and protrudes out of sidewall **62** through aperture **90**, wherein attachment screw **120** engages
10 the wall or door. Notably, channel **100** is of a sufficient size and is in a position relative to channel **110** that complete insertion of attachment screw **120** into channel **100** does not block channel **110**.

15 To secure door bump **40** to door bump angled block **50**, another attachment screw **120** is inserted into aperture **140** of door bump connector plate **130** and then inserted into aperture **70** of door bump angled block **50** so that attachment screw **120** passes through channel **110** and protrudes out of
20 sidewall **62** through aperture **80**, wherein attachment screw **120** engages the wall or door. Terminal end **160** of door bump **40** is then inserted into aperture **150** of door bump connector plate **130** to attach door bump **40** to door bump

angled block **50**. It is contemplated in an alternate embodiment that door bump **40**, connector plate **130** and attachment screw **120** are combined to form a unitary structure, wherein said unitary structure is attached to
5 door bump angled block **50** to form apparatus **30**.

Referring now to **FIGS. 5-6B**, in an alternate embodiment, door bump angled block **250** could have a shape wherein three-dimensional semicircle or quarter-circle **210**
10 is permanently joined to flat plate **200**. It is further contemplated in alternate embodiments that flat plate **200** may define an alternate shape, such as, for exemplary purposes only, circular, rectangular or eye-shaped. Furthermore, flat plate **200** has an aperture **280** or **290**
15 disposed thereon on either side of three-dimensional semicircle or quarter-circle **210**, wherein said aperture **280** or **290** is of a suitable shape and size to allow insertion of attachment screws **220**, and wherein attachment screws **220** secures flat plate **200** of door bump angled block **250** to the
20 wall or door.

It is further contemplated that door bump angled block **250** has a pivotable hinge **230** wherein base connector **240** of

door bump angled block **250** can pivot along outer surface **260** of said three-dimensional semicircle or quarter-circle on a horizontal axis. Pivotal hinge **230** can employ any number of pivoting mechanisms, such as, for exemplary
5 purposes only, a plurality of mated wheels with toothed faces or a frictional fitting pivotal hinge. Moreover, pivotal hinge **230** comprises a locking mechanism to fix base connector **240** into a locked position. Such locking mechanisms include, but are not limited to, screw locks,
10 cam locks, stops or detents.

Base connector **240** of door bump angled block **250** has disposed thereon aperture **270**, wherein aperture **270** is of a suitable shape and size to allow insertion of another
15 attachment screw **220**, and wherein said attachment screw **220** attaches door bump connector plate **130** to base connector **240** of door bump angled block **250**. Terminal end **160** of door bump **40** is then inserted into aperture **150** of door bump connector plate **130** to attach door bump **40** to door
20 bump angled block **250**. Thus, door bump angled block **250**, in this embodiment, can position door bump **40** in various angles relative to the door and wall. This allows the user to use this device on any door or wall in a building.

Referring now to **FIGS. 7-9**, in an alternate embodiment, door bump angled block **350** could have a shape wherein post **310** is permanently joined to flat plate **300**.

5 It is further contemplated that flat plate **300** may define an alternate shape, such as, for exemplary purposes only, circular, rectangular or eye-shaped. Furthermore, flat plate **300** has apertures **380** and **390** disposed thereon on either side of post **310**, wherein said apertures **380** and **390**
10 are of a suitable shape and size to allow insertion of attachment screws **320**, and wherein attachment screws **320** secures flat plate **300** of door bump angled block **350** to the wall or door.

15 Post **310** is generally conical shaped, wherein base connector **340** is pivotably attached to the terminal end of post **310**. It is contemplated in alternate embodiments that post **310** can be any shape or size, such as, for exemplary purposes only, a cylinder, block or pyramid. It is further
20 contemplated that any number of pivoting mechanisms can be used, such as, for exemplary purposes only, a hinge pin, a plurality of mated wheels with toothed faces, or a frictional fitting pivotable hinge. Moreover, door bump

angled block **350** can comprise a locking mechanism to fix base connector **340** into a locked position. Such locking mechanisms include, but are not limited to, screw locks, cam locks, stops or detents.

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Base connector **340** of door bump angled block **350** has disposed thereon aperture **370**, wherein aperture **370** is of a suitable shape and size to allow insertion of another attachment screw **320**, and wherein said attachment screw **320** attaches door bump connector plate **130** to base connector **340** of door bump angled block **350**. Terminal end **160** of door bump **40** is then inserted into aperture **150** of door bump connector plate **130** to attach door bump **40** to door bump angled block **350**. Thus, door bump angled block **350**, in this embodiment, can position door bump **40** in various angles relative to the door and wall. This allows the user to use this device on any door or wall in a building.

Referring now to **FIGS. 10-11**, in an alternate embodiment, door bump **345** is pivotably attached to the terminal end of post **310**. It is contemplated that any number of pivoting mechanisms can be used, such as, for exemplary purposes only, a hinge pin, a plurality of mated

wheels with toothed faces, or a frictional fitting
pivotal hinge. Moreover, post **310** can comprise a locking
mechanism to fix door bump **345** into a locked position.
Such locking mechanisms include, but are not limited to,
5 screw locks, cam locks, stops or detents. Thus, post **310**,
in this embodiment, can position door bump **345** in various
angles relative to the door and wall.

Door bump **345**, in this embodiment, comprises a rubber
10 cap fixed to the terminal end of a substantially
cylindrical shaped rod. It is further contemplated in
alternate embodiments that door bump **345** could comprise any
number of suitable components known within the art to
facilitate the purpose of dissipating the forces generated
15 when a door strikes a door bump.

Referring now to **FIGS. 12-13**, in an alternate
embodiment, apparatus **430** comprises door bump **440**, wherein
door bump **440** is permanently joined to flat plate **400**. It
20 is further contemplated in alternate embodiments that flat
plate **400** may define an alternate shape, such as, for
exemplary purposes only, circular, rectangular or eye-
shaped. Moreover, flat plate **400** has apertures **480** and **490**

disposed thereon on either side of door bump **440**, wherein said apertures **480** and **490** are of a suitable shape and size to allow insertion of attachment screws **420**, and wherein attachment screws **420** secures flat plate **400** to the wall or
5 door.

Door bump **440**, in this embodiment, comprises post **442**, rod **444** and rubber cap **446**, wherein the distal end of post **442** is permanently joined to flat plate **400** at an angle
10 perpendicular to the mounted plane of flat plate **400**. Furthermore, rubber cap **446** is fixed to the terminal end of rod **444**, wherein the opposite end of rod **444** is permanently joined to post **442** at a non-parallel angle. Thus, apparatus **430**, in this embodiment, can position rubber cap
15 **446** relative to the wall or door so that the wall or door will contact the rubber cap squarely, thereby protecting the door, door casing, door knob and wall.

Although apparatus **30** of the preferred and alternate
20 embodiments provides generally first component door bump **40** and second component door bump angled block **50**, it is contemplated in an alternate embodiment that apparatus **30** could comprise any number of components to facilitate the

purpose of protecting doors, door casings, door knobs and walls.

In another alternate embodiment, apparatus **30** could be applied to other articles having doors such as, for exemplary purposes only, storage bins, cabinets, refrigerators, washer-dryer units, stove-oven units, or the like.

10 In another alternate embodiment, door bump angled block **50** could be decorative.

In another alternate embodiment, door bump angled block **50** could be manufactured from an opaque or
15 transparent material to conceal its presence.

In yet another alternate embodiment, door bump angled block **50** could be dome shaped.

20 In still another alternate embodiment, door bump **40** could have extending and retracting or telescoping capabilities.

Having thus described exemplary embodiments of the present invention, it should be noted by those skilled in the art that the within disclosures are exemplary only, and that various other alternatives, adaptations, and
5 modifications may be made within the scope of the present invention. Accordingly, the present invention is not limited to the specific embodiments illustrated herein, but is limited only by the following claims.

WHAT IS CLAIMED IS:

1. An apparatus for protecting doors, door casings,
door knobs and walls having a surface, said apparatus
5 comprising:

at least one door bump; and

a means for mounting said at least one door bump on a
surface, wherein said at least one door bump extends at a
10 non-perpendicular angle from the surface.

2. The apparatus of claim 1, wherein said means for
mounting is a non-perpendicularly angled distal end of said
door bump.

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3. The apparatus of claim 1, wherein said means for
mounting is an angled block.

4. The apparatus of claim 1, wherein said angled
20 block comprises means for adjusting the angular position of
said door bump relative to the surface.

5. The apparatus of claim 1, wherein said means for adjusting the angular position of said door bump is a frictional fitting pivotable hinge.

5 6. The apparatus of claim 1, wherein said means for adjusting the angular position of said door bump is a plurality of mated wheels with toothed faces.

7. The apparatus of claim 3, further comprising a
10 connector plate for connecting said door bump to said angled block.

8. The apparatus of claim 3, wherein said angled block has formed therein at least one channel dimensioned
15 to receive a securing means there through to attach said angled block to the surface

9. The apparatus of claim 3, wherein said angled block has formed therein at least one channel dimensioned
20 to receive a securing means there through to attach said angled block to said connector plate.

10. The apparatus of claim 3, wherein said angled block comprises a wall or door mounting surface and a door bump mounting surface, wherein said wall or door mounting surface is at a non-perpendicular angle to said door bump
5 mounting surface.

11. The apparatus of claim 3, wherein said at least one channel to attach said angled block to the surface and said at least one channel to attach said angled block to
10 said connector plate converge at a single aperture on said door bump mounting surface.

12. A method for protecting doors, door casings, door knobs and walls, comprising the step of:

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mounting at least one angled block to a surface such as a door or a wall, wherein a door bump extends therefrom at a non-perpendicular angle.

20 13. A method for protecting doors, door casings, door knobs and walls, comprising the step of:

mounting at least one door bump to a surface such as a door or a wall, wherein said door bump has a non-perpendicularly angled distal end.

5 14. The method of claim 12, further comprising the step of mounting said door bump to said angled block.

15. A method for protecting doors, door casings, door knobs and walls, comprising the step of:

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adjusting the angular position of the door bump relative to the mounting surface by pivoting said door bump along a horizontal axis.

ABSTRACT

An apparatus and method for protecting a door, door casing, door knob and wall utilizing a door bump angled
5 block, wherein the apparatus and method changes the orientation of a door bump relative to the door and wall. The apparatus and method of the present invention allows a door bump to contact the door or wall squarely, thus allowing the door bump to effectively dissipate the forces
10 generated when the door or wall strikes the door bump. Further, the apparatus and method of the present invention allows the user to adjust the extent to which a door may be opened by varying the position of the door bump, thereby protecting the door, door casing, door knob, wall and
15 abutting objects.

Nonprovisional National Phase Application:

Inventor: Davis et al.

For: Apparatus and Method for Protecting a Door, Door Casing, Door Knob and
Wall Utilizing a Door Bump Angled Block

Myers & Kaplan, LLC

Drawing Sheet 1 of 17

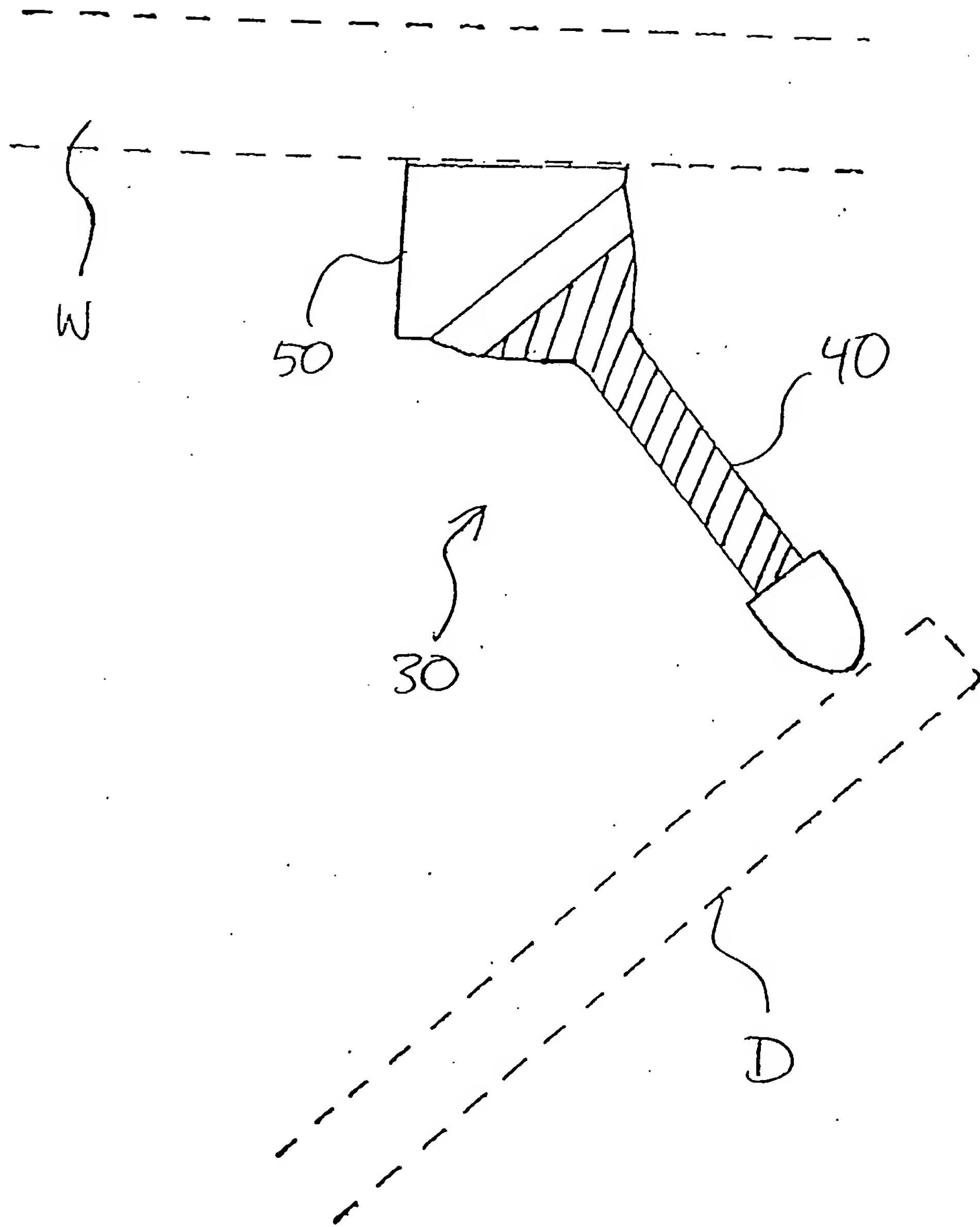


FIG. 1A

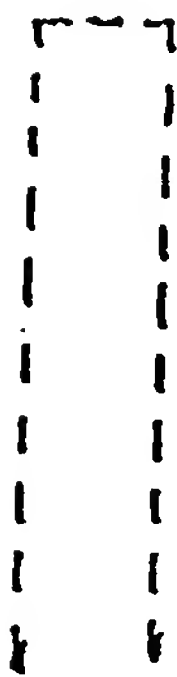
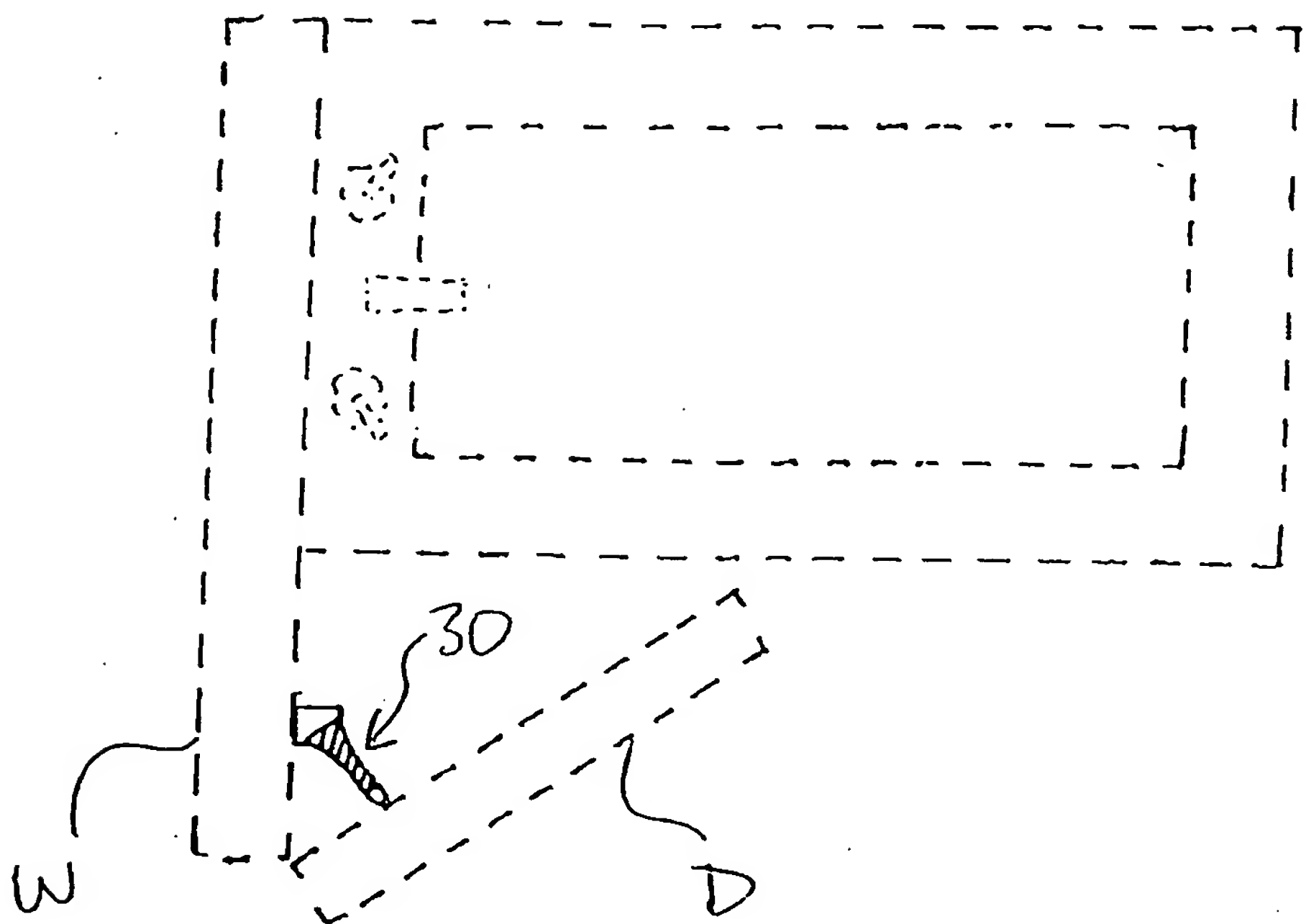


FIG. 1B

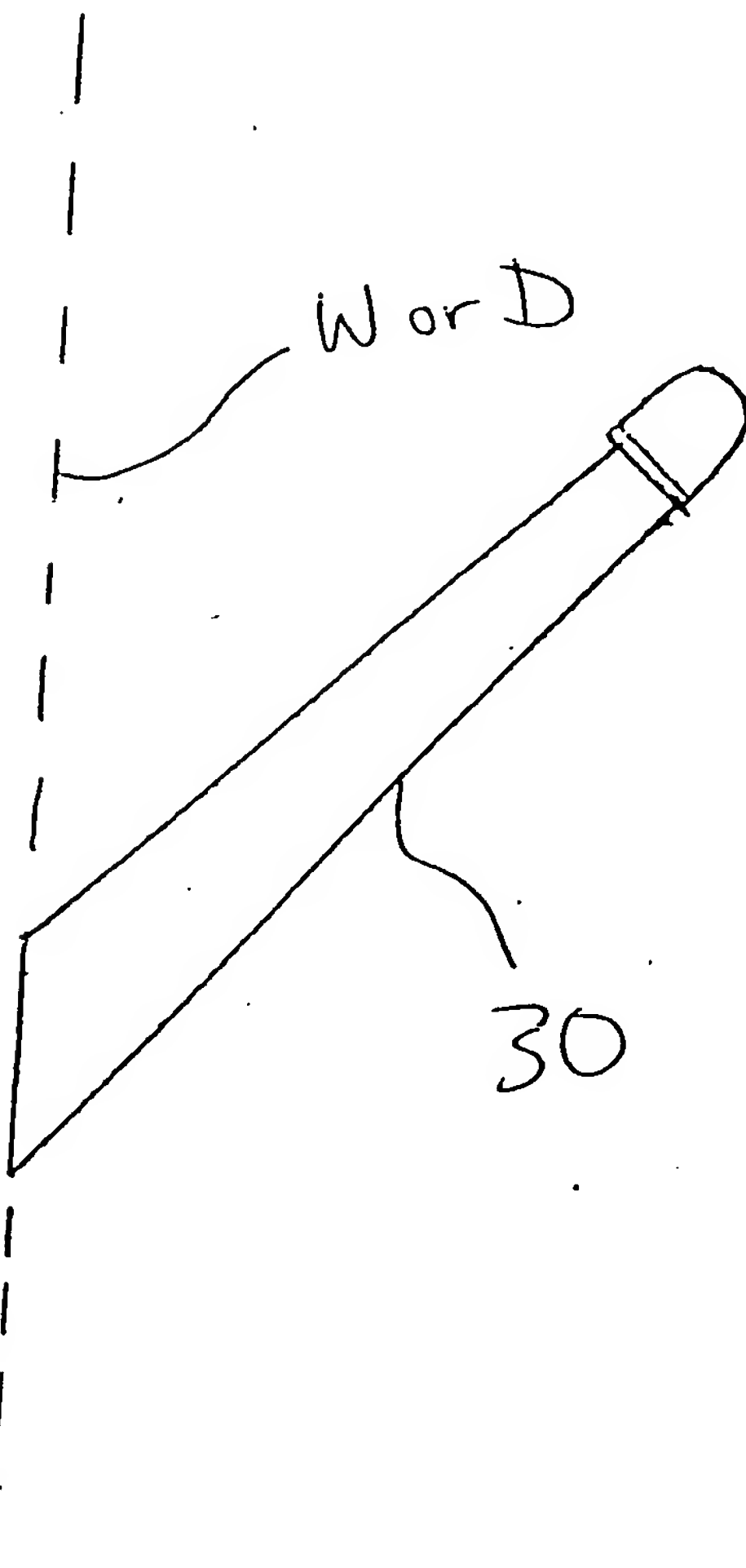


FIG. 1C

Nonprovisional National Phase Application:
Inventor: Davis et al.
For: Apparatus and Method for Protecting a Door, Door Casing, Door Knob and
Wall Utilizing a Door Bump Angled Block
Myers & Kaplan, LLC
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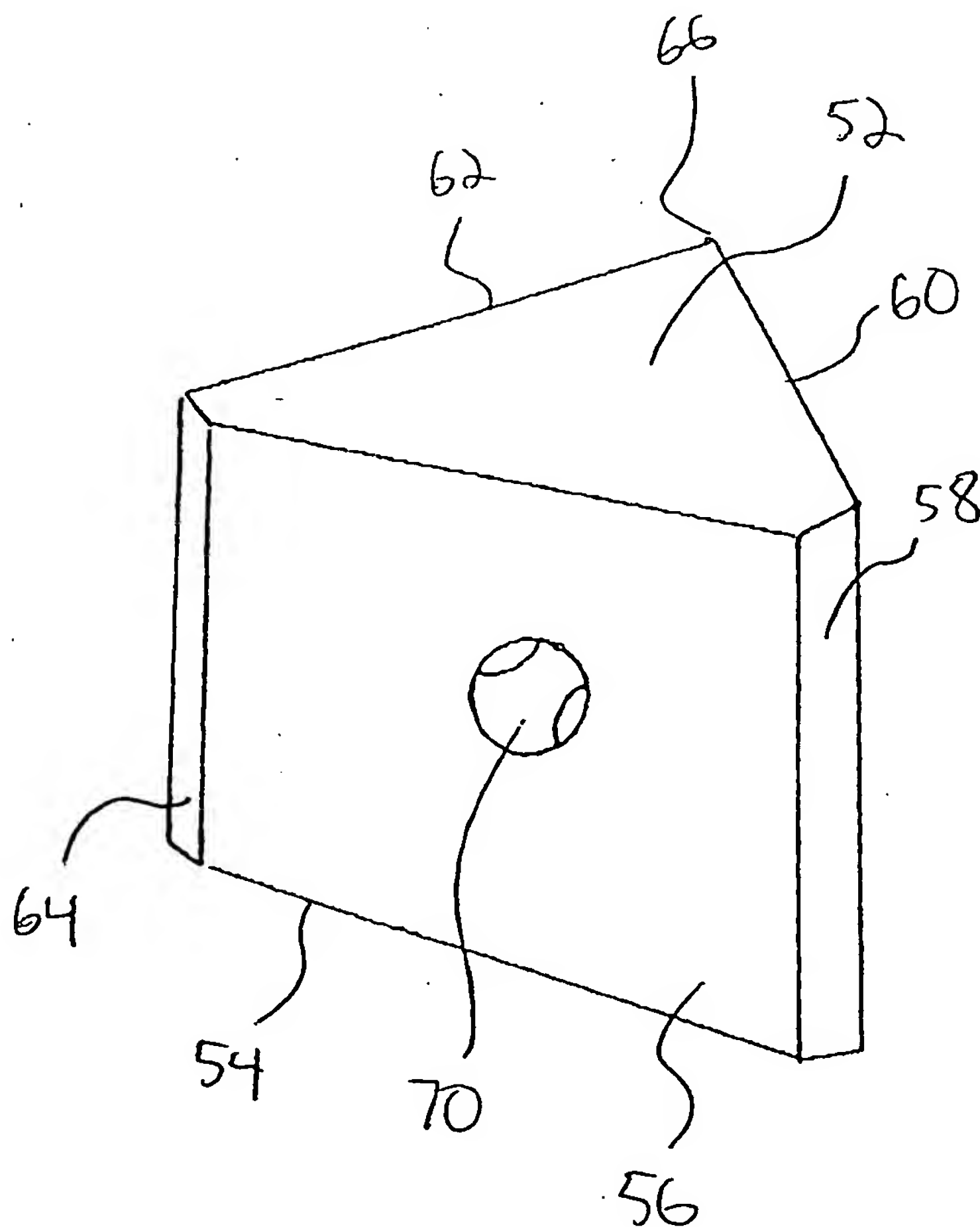


FIG. 2

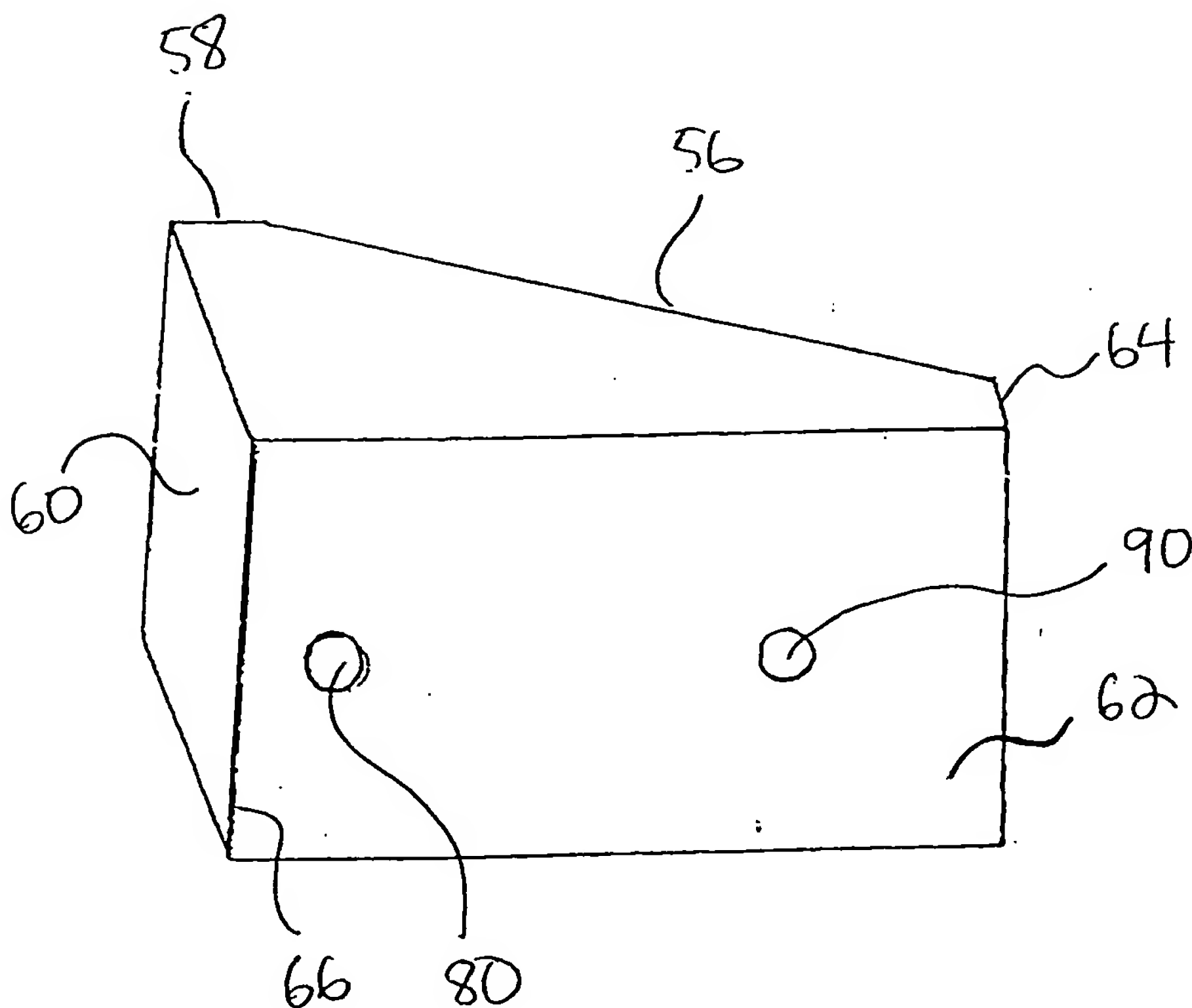


FIG. 3

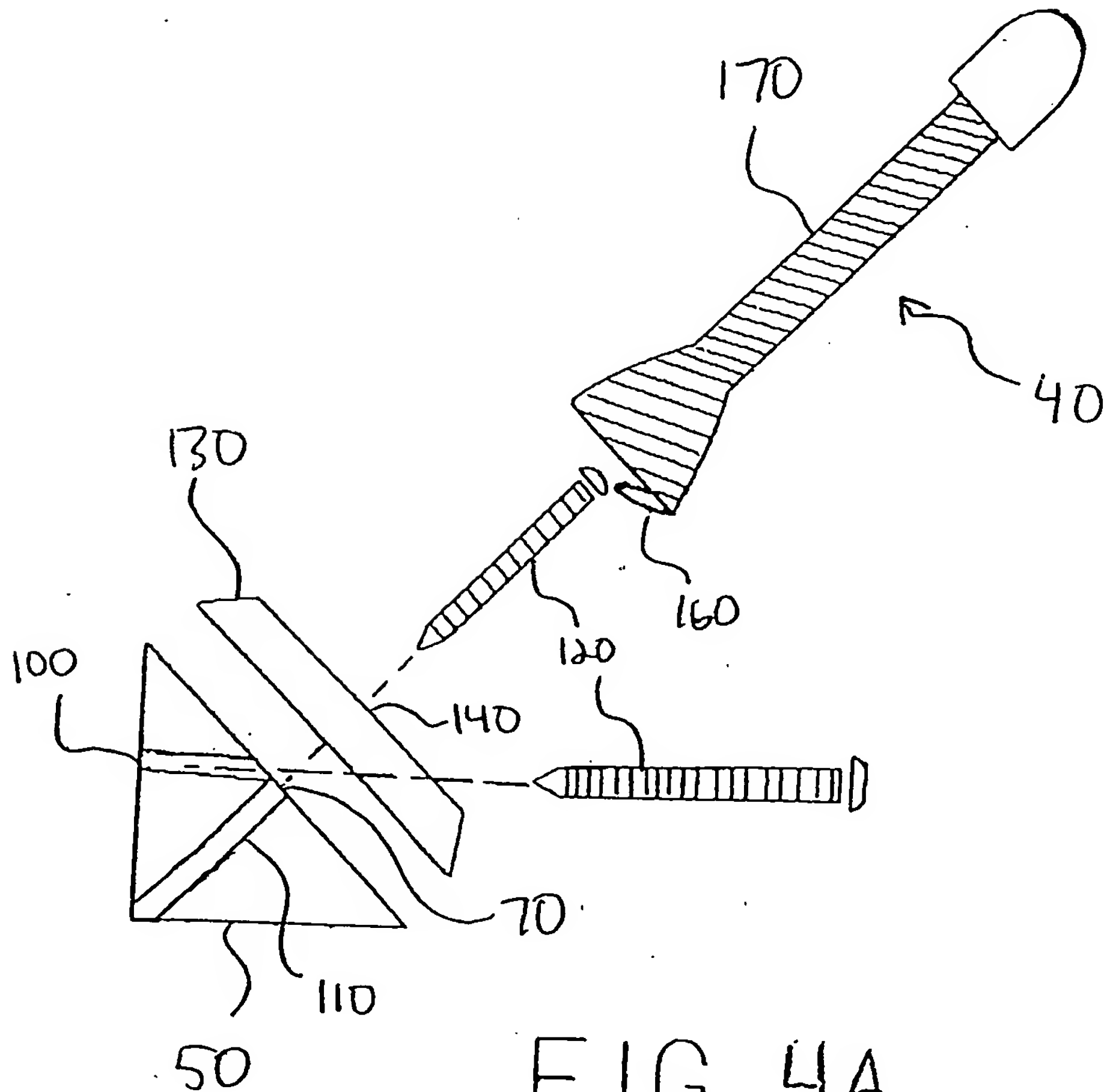


FIG 4A

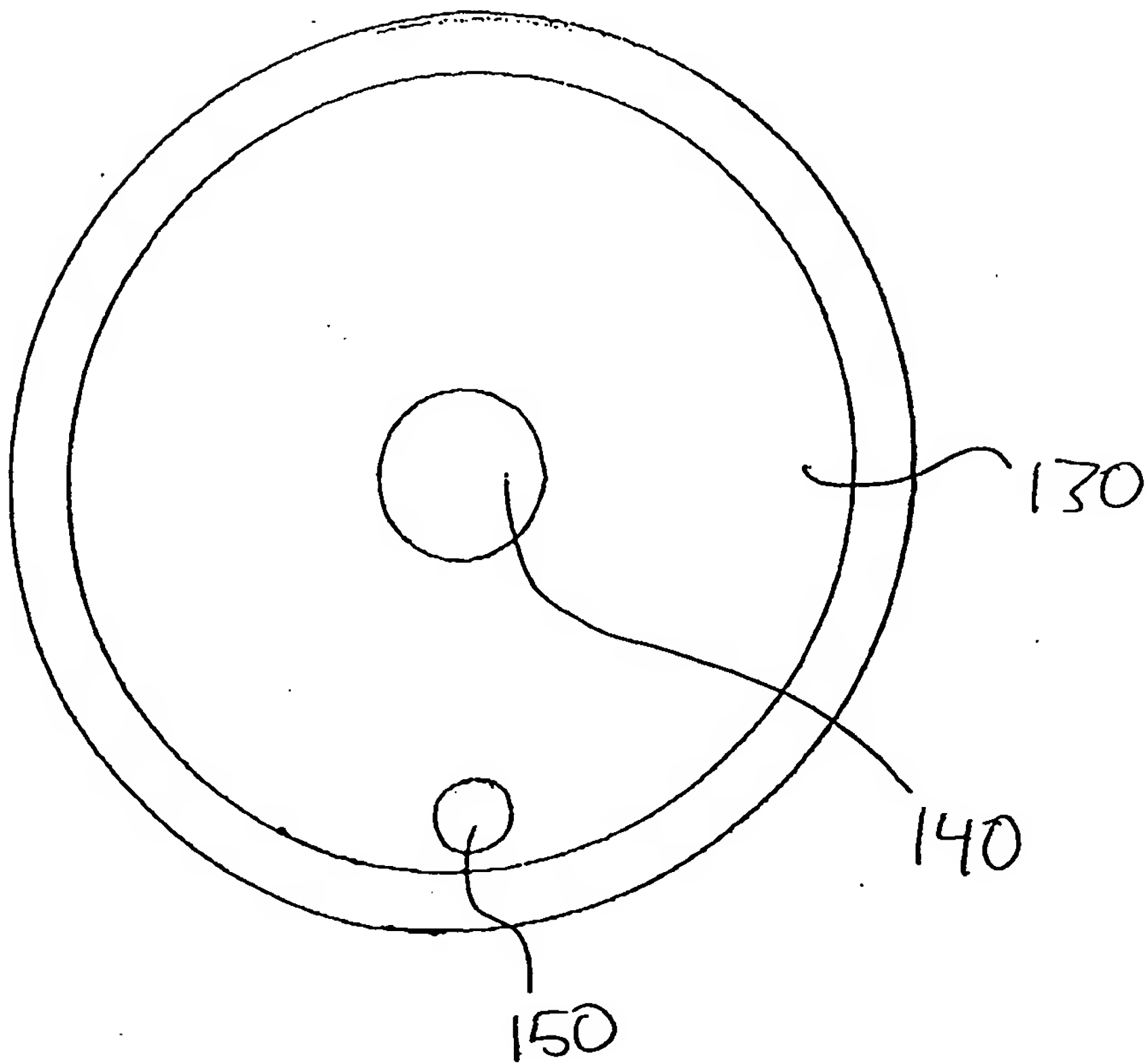


FIG. 4B



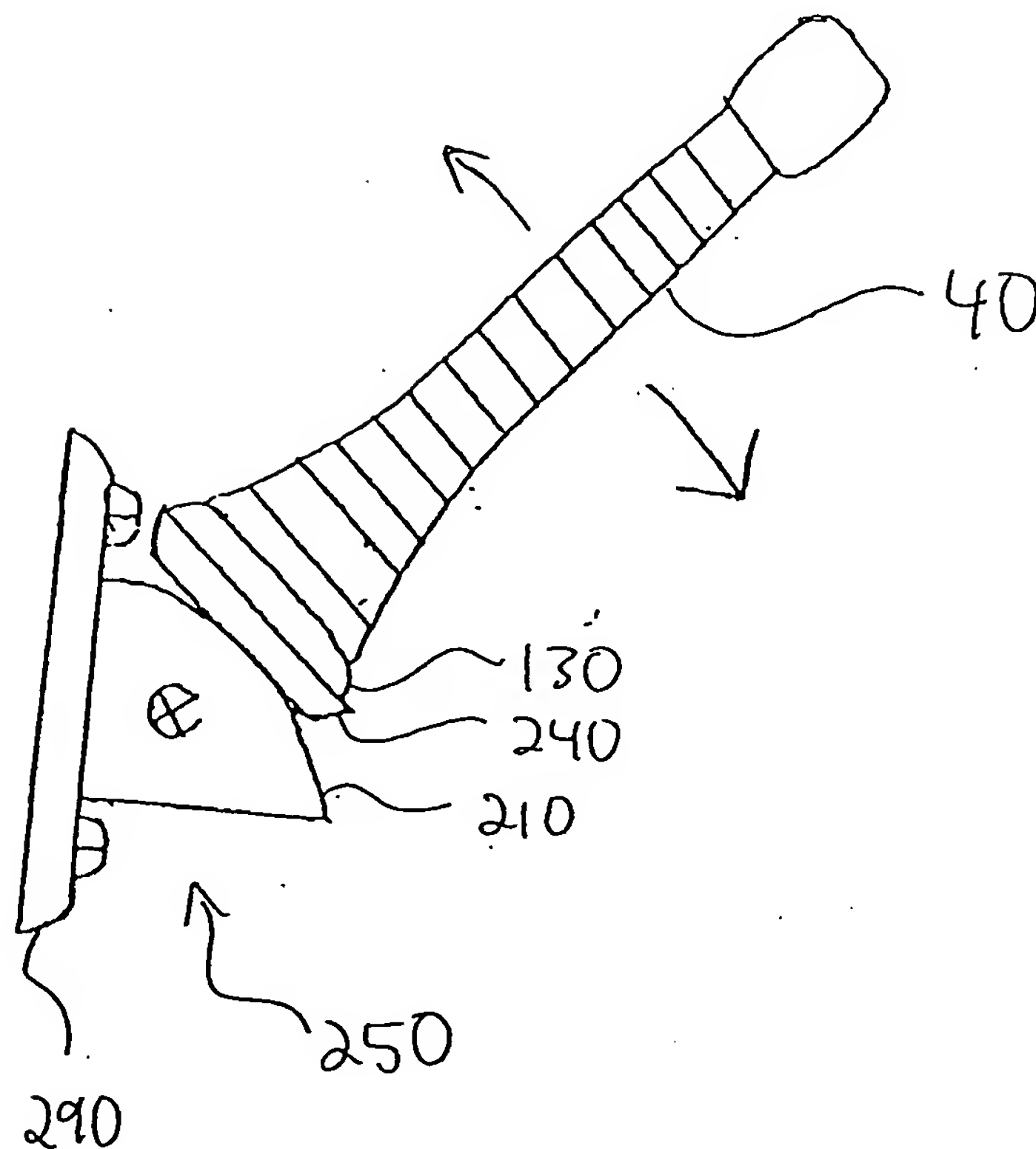


FIG. 6A

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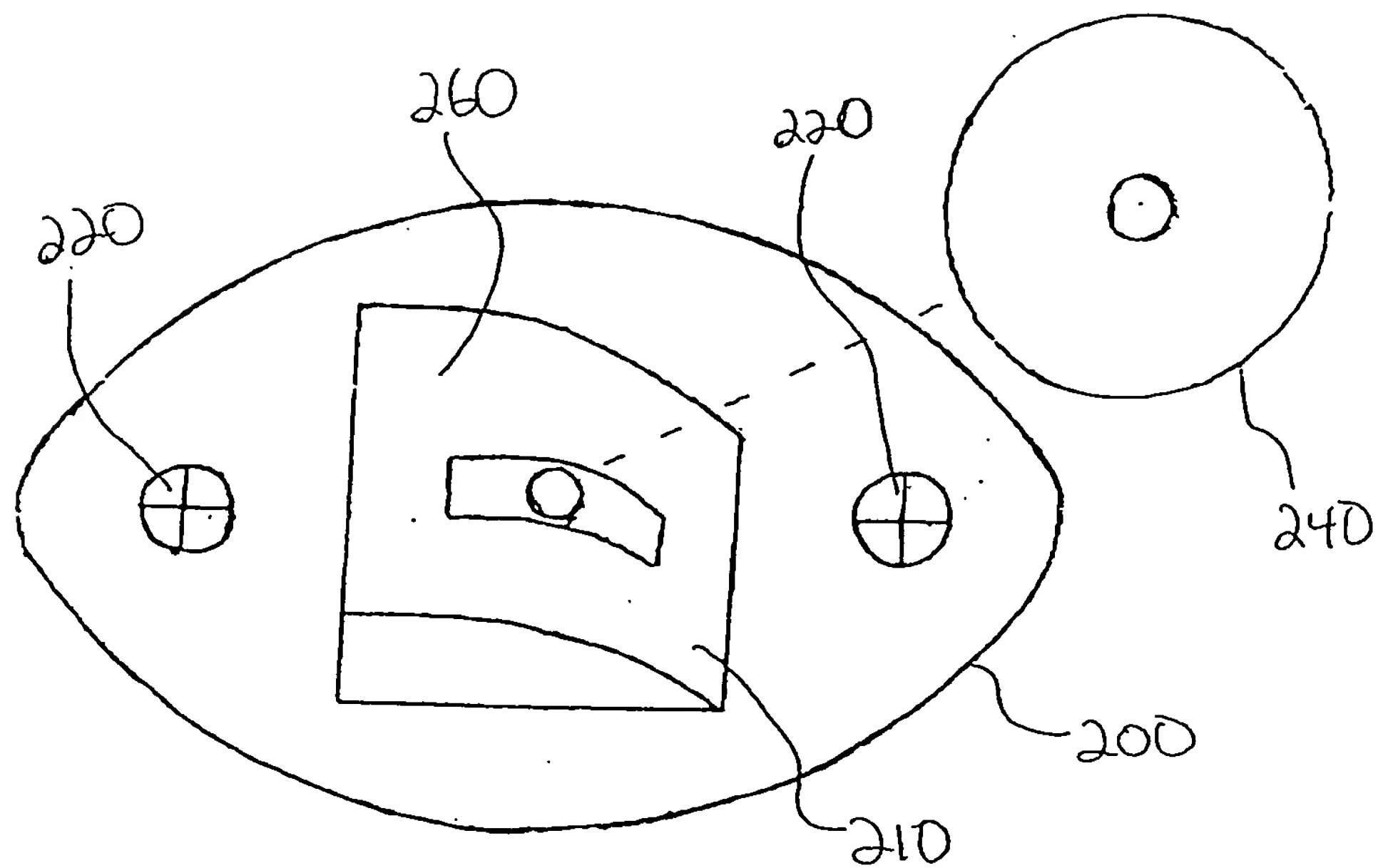


FIG. 6B

**For: Apparatus and Method for Protecting a Door, Door Casing, Door Knob and
Wall Utilizing a Door Bump Angled Block
Myers & Kaplan, LLC
Drawing Sheet 11 of 17**

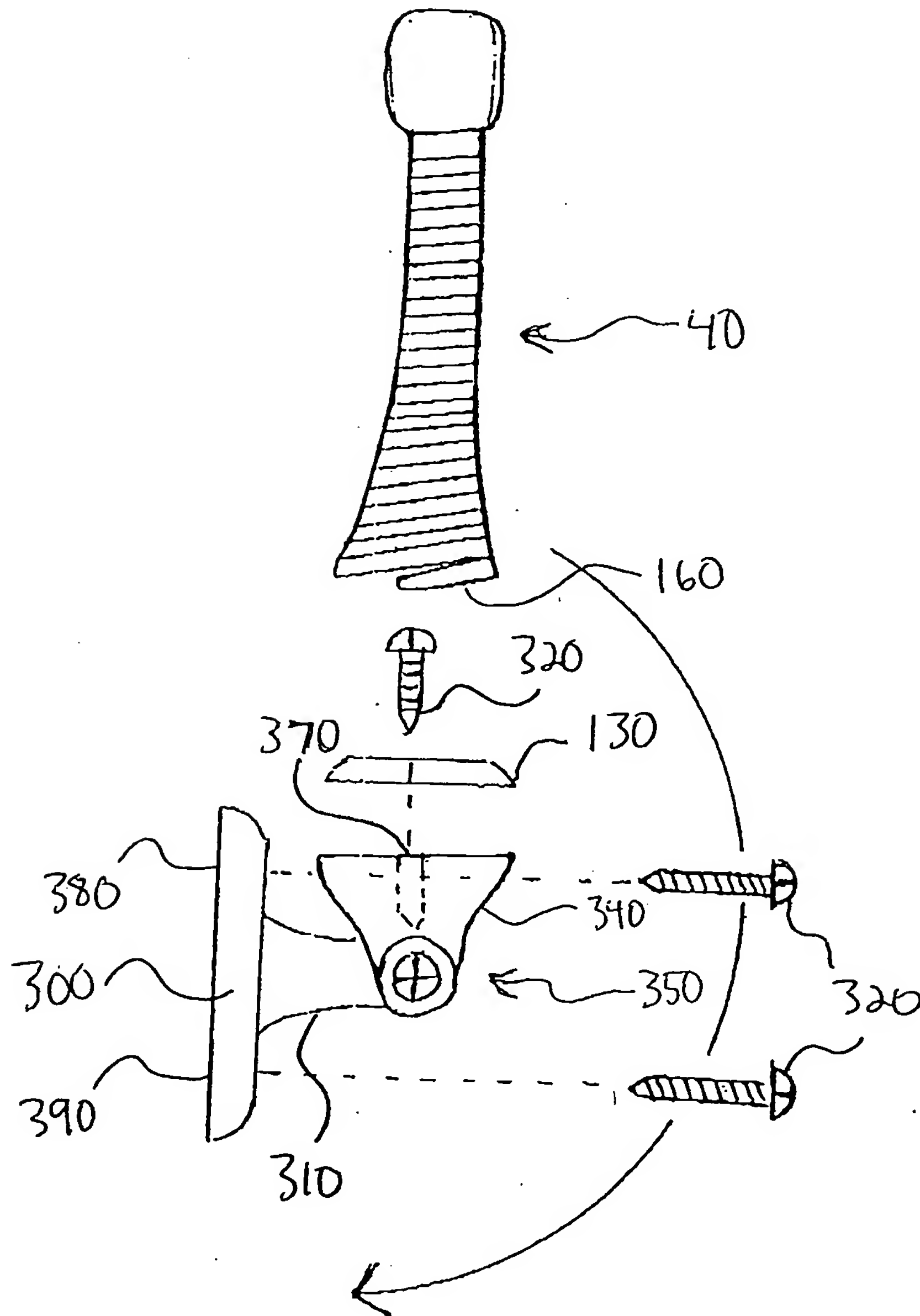


FIG. 7

For: Apparatus and Method for Protecting a Door, Door Casing, Door Knob and
Wall Utilizing a Door Bump Angled Block

Myers & Kaplan, LLC

Drawing Sheet 12 of 17

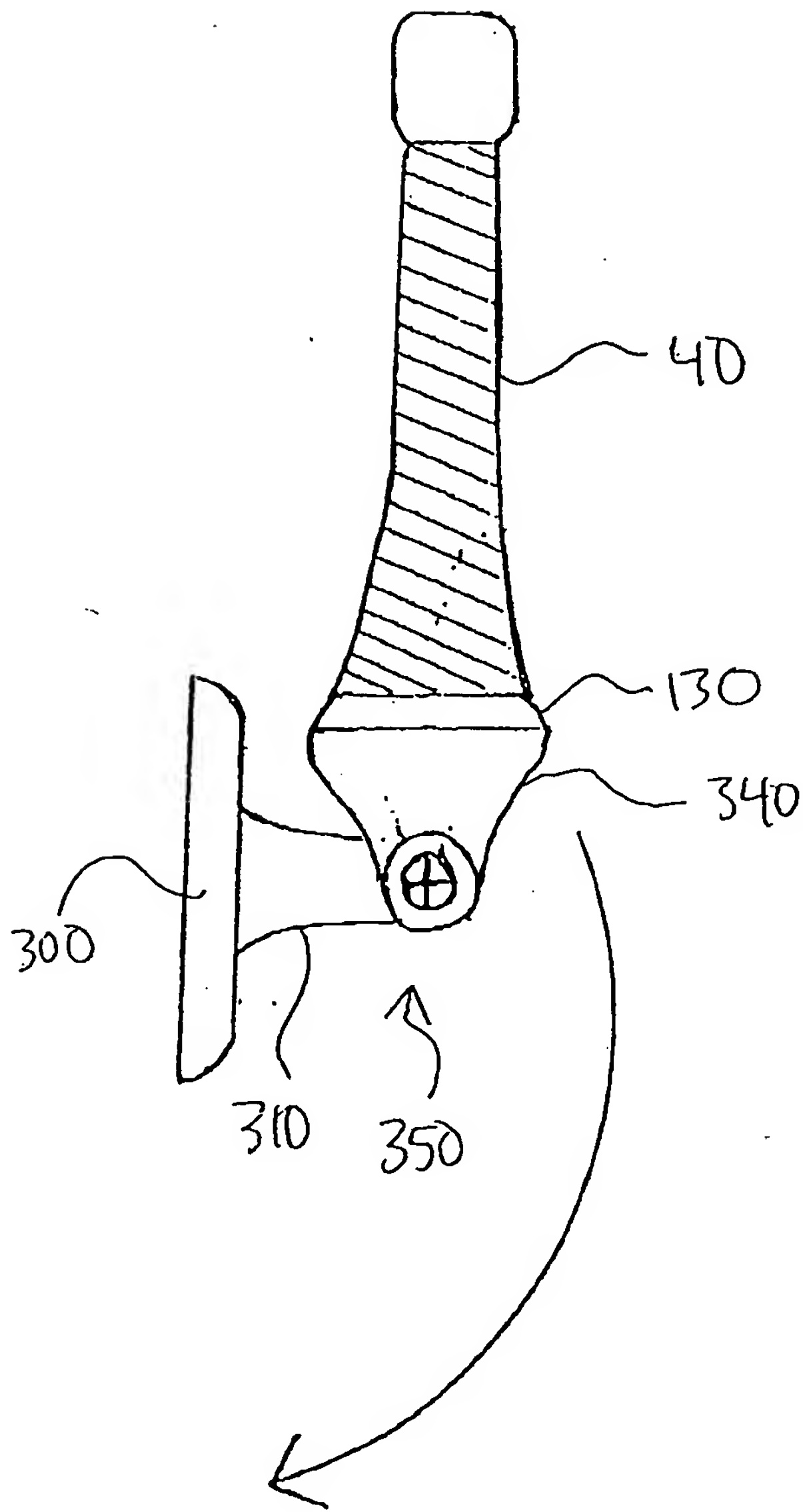


FIG. 8

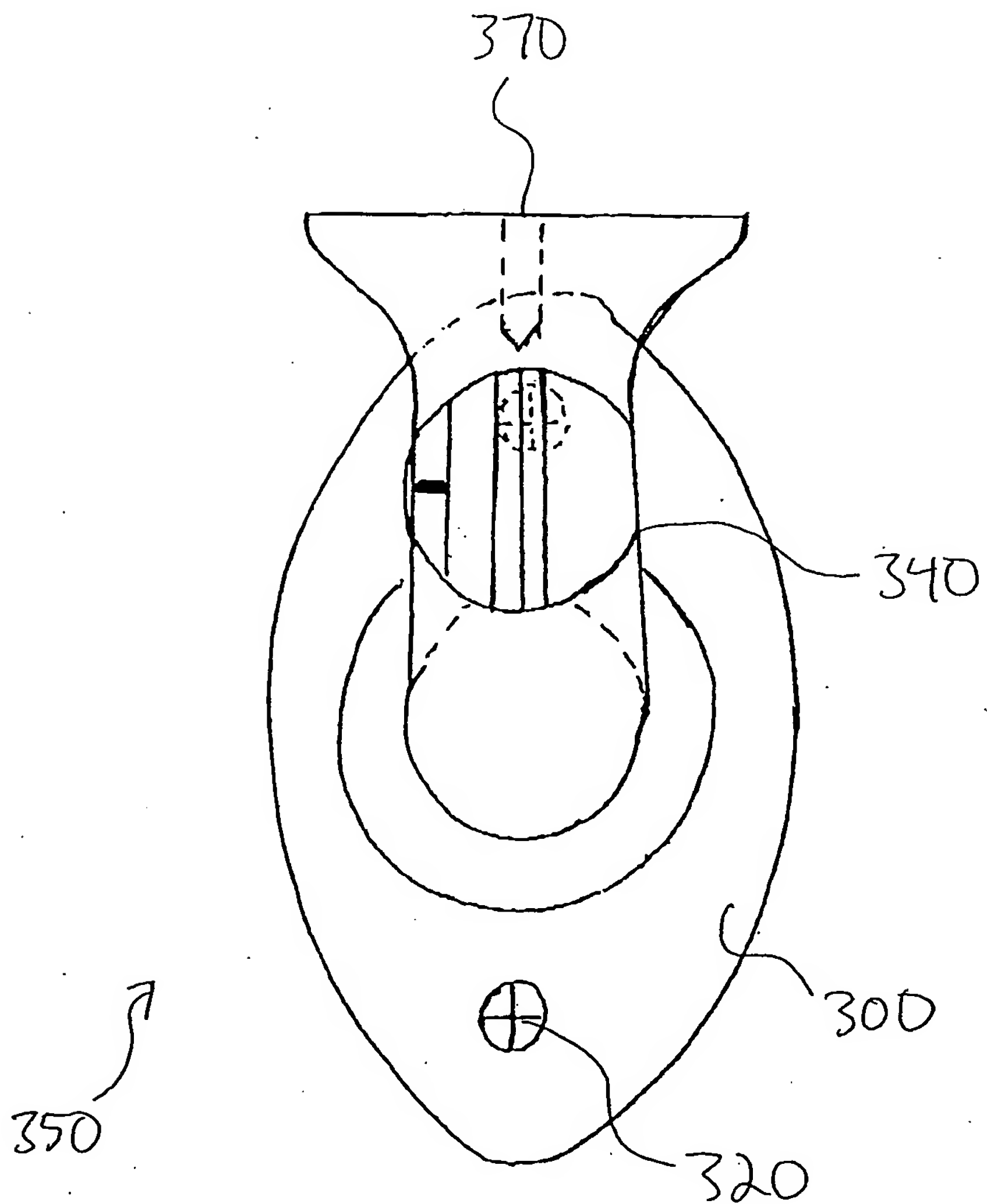


FIG. 9

10/552846

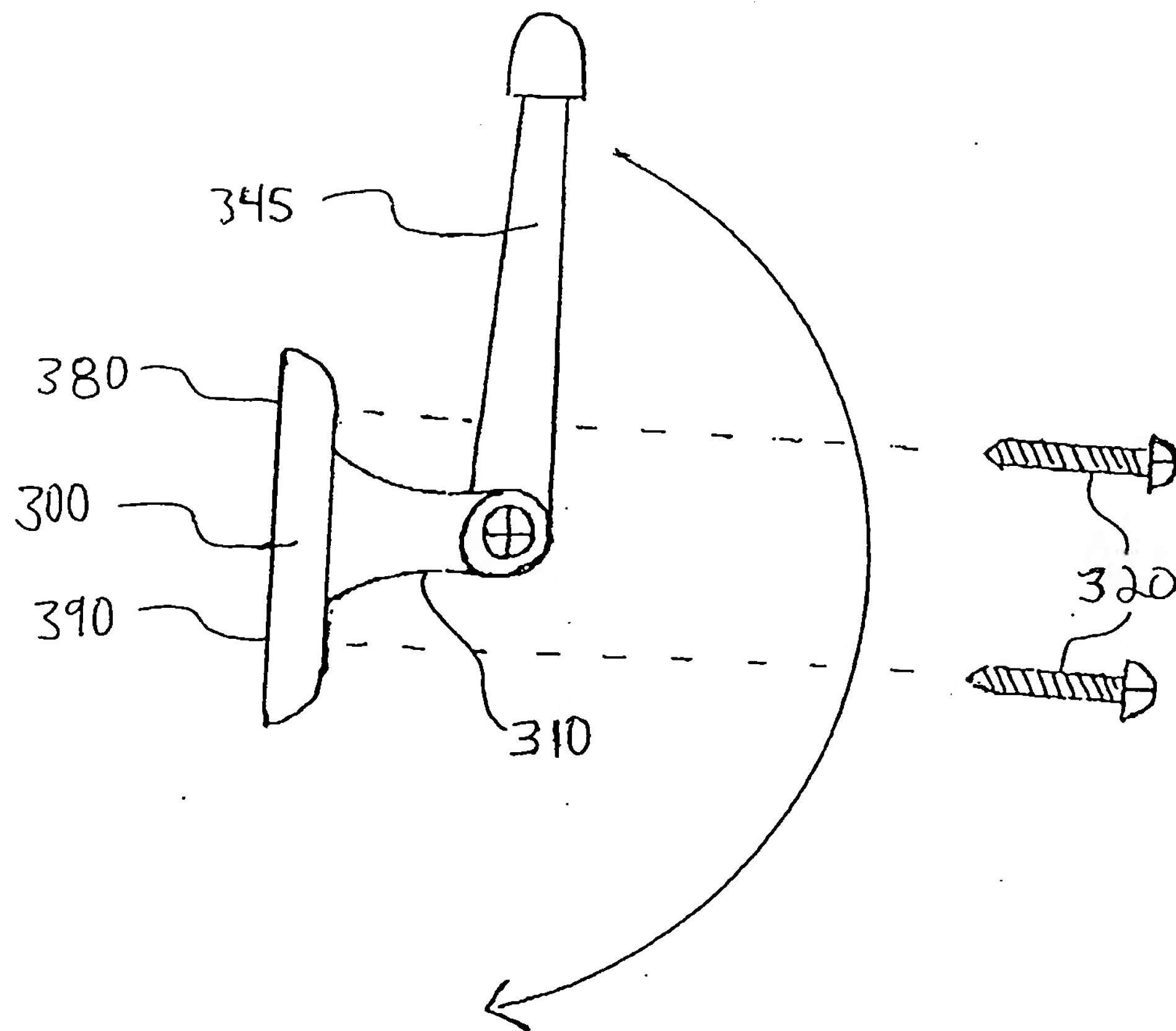


FIG. 10

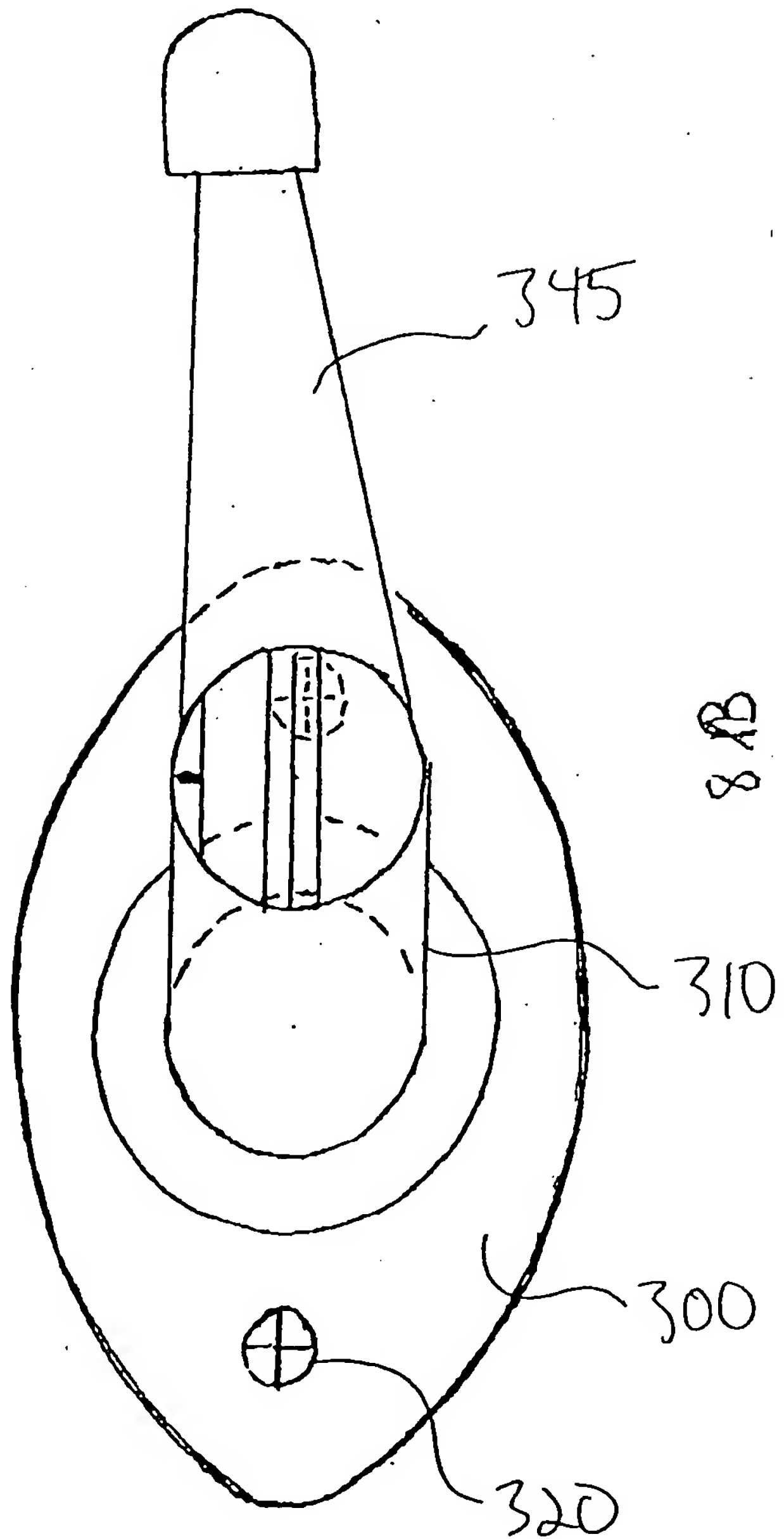


FIG. 11

Inventor: Davis et al.

For: Apparatus and Method for Protecting a Door, Door Casing, Door Knob and
Wall Utilizing a Door Bump Angled Block

Myers & Kaplan, LLC

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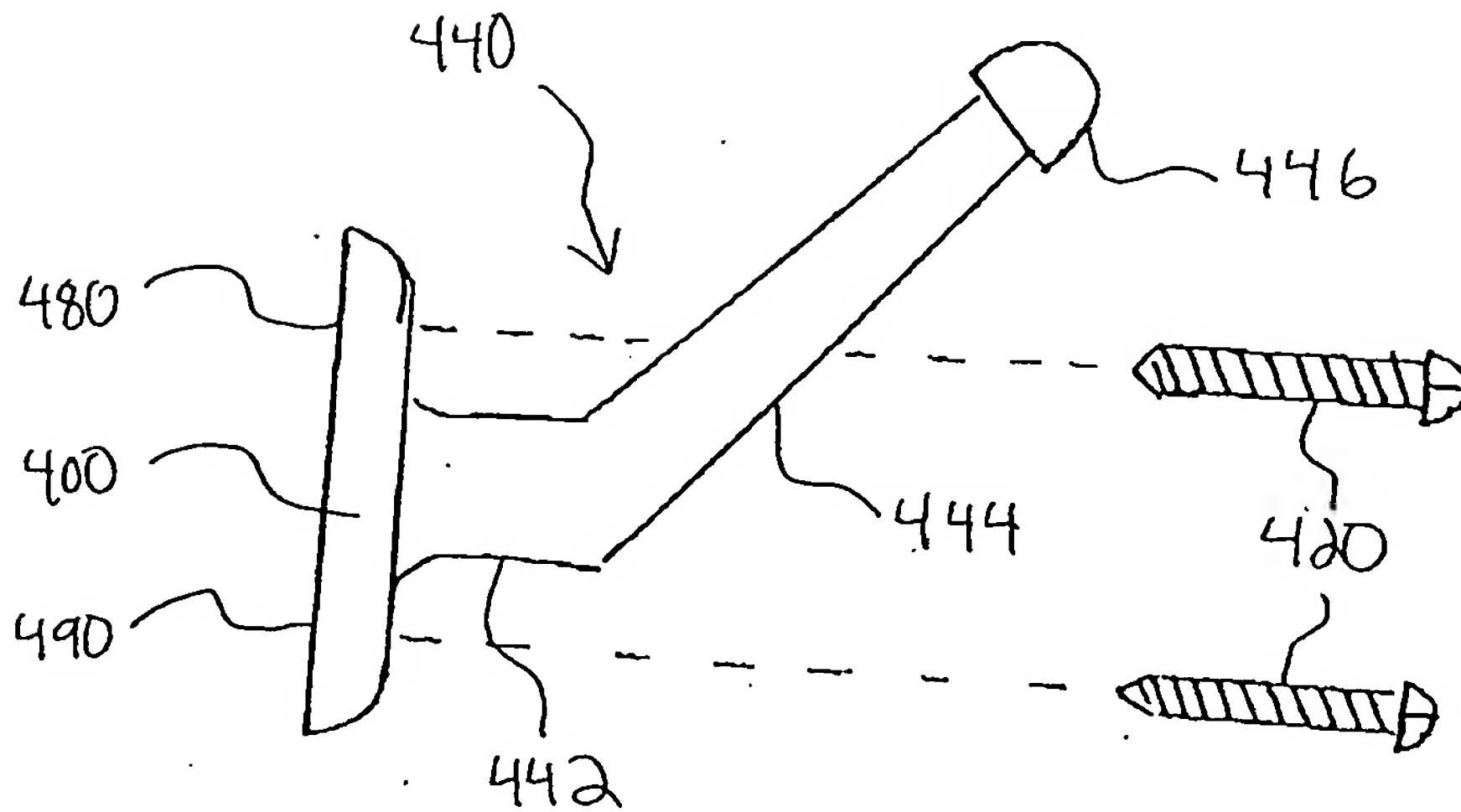


FIG. 12

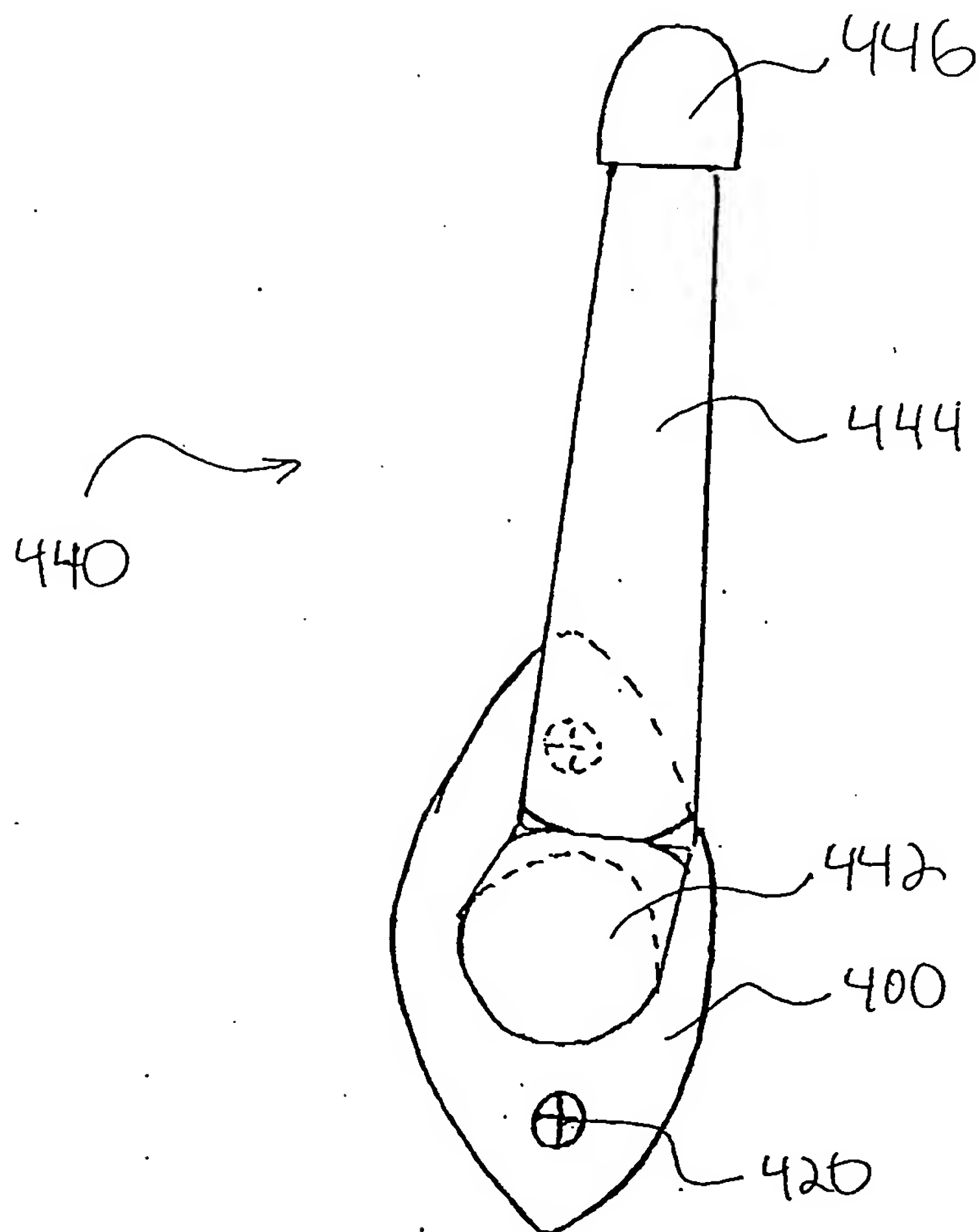


FIG. 13